

**VIRGINIA STANDARDS OF LEARNING**

**Spring 2004 Released Test**

# **GRADE 5 MATHEMATICS**

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**LARGE PRINT FORM**

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Printed in the United States of America

ISBN 999-8239-16-8

## DIRECTIONS

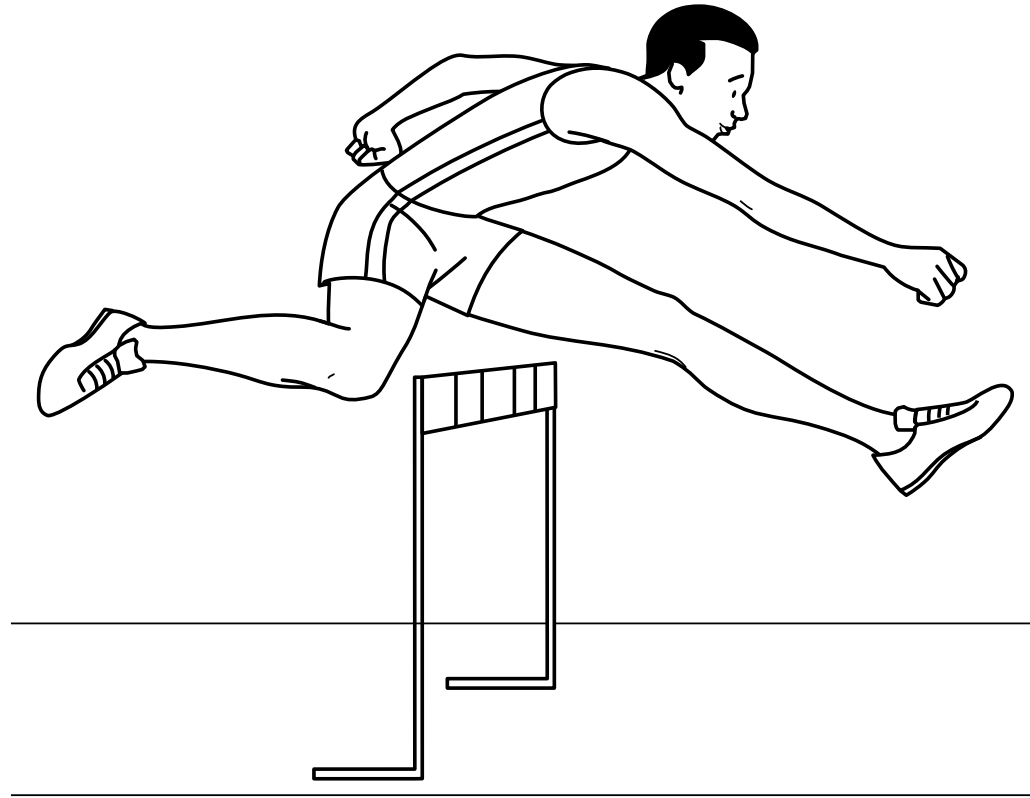
Read and solve each question.

### SAMPLE

Jenny found 17 seashells at the beach. What is 17 rounded to the nearest ten?

- A 10
- B 15
- C 20
- D 25

- 1 The men's 110-meter hurdles is an event in the Olympic games.



The distance from the starting line to the first hurdle is 13.72 meters. The distance from the first hurdle to the second hurdle is 9.14 meters. What is the total distance from the starting line to the second hurdle?

- A 19.86 meters
- B 22.86 meters
- C 23.86 meters
- D 24.86 meters

2

$$\begin{array}{r} 2\frac{2}{3} \\ - \quad 1\frac{1}{4} \\ \hline \end{array}$$

F  $2\frac{5}{12}$

G  $2\frac{3}{7}$

H  $1\frac{1}{12}$

J  $1\frac{5}{12}$

3             $12.08 \times 1.7 =$

A    2,053.6

B    205.36

C    20.536

D    2.0536

4    The sum of  $32,796 + 47,580$  is best described as

F    about 60,000

G    about 70,000

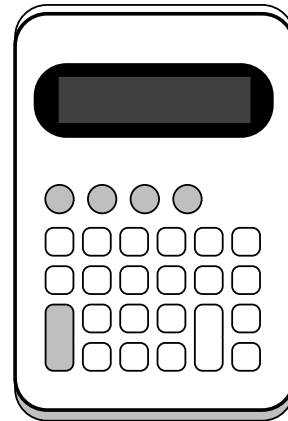
H    about 80,000

J    about 90,000

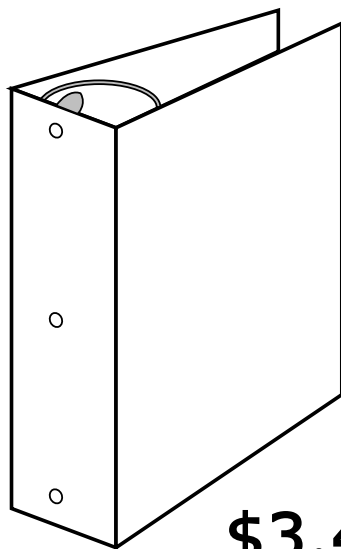
- 5 Matt bought the items shown below at the school store.  
The prices shown include tax.



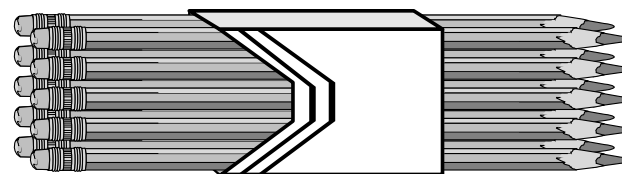
79¢



\$9.62



\$3.45



\$2.18

What was the total cost of these four items?

- A \$14.84
- B \$15.04
- C \$16.04
- D \$23.15

6 In one hour, Tracy walked 2.31 miles on a treadmill.  
Lisa walked 1.95 miles in the same amount of time.  
How much farther did Tracy walk than Lisa?

F 1.66 miles

G 1.36 miles

H 0.46 mile

J 0.36 mile

7  $7.548 \div 6 =$

A 1,258

B 125.8

C 12.58

D 1.258

8                     $18,416 - 5,037 =$

F    13,339

G    13,379

H    13,429

J    13,479

9 Which of the following is the BEST ESTIMATE of the solution to  $25 \times 101$ ?

A    250

B    2,500

C    25,000

D    250,000



10 To prepare for a regional competition, Keith practiced on his skateboard 12 hours each week for 18 weeks. How many hours did Keith practice in all?

F 216

G 192

H 116

J 30

11  $3\overline{)79} =$

A 26 R1

B 26 R10

C 25 R4

D 25 R3

12

$$\frac{5}{12} + \frac{10}{12} =$$

F  $\frac{5}{8}$

G  $\frac{5}{9}$

H  $1\frac{1}{3}$

J  $1\frac{1}{4}$

13 Which number goes into the box to make the statement true?

$$4,\square 76,192 < 4,578,136$$

- A 7
- B 6
- C 3
- D 8

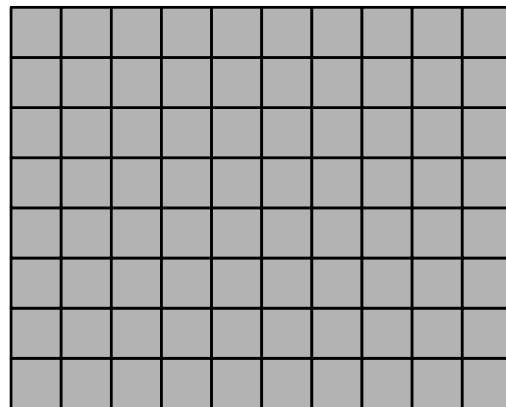
14 Martha's pet ferret measures 42.27 centimeters long.



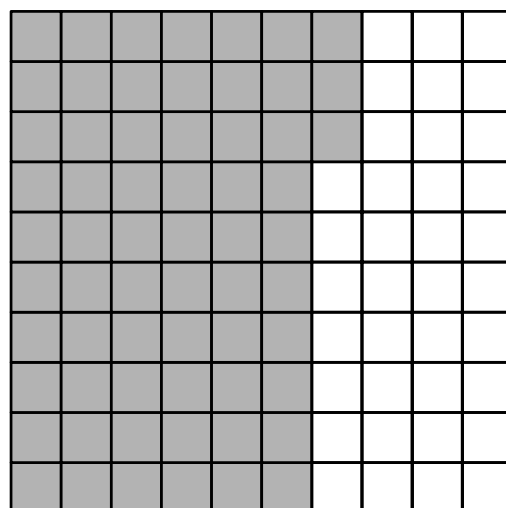
What is that length rounded to the nearest tenth of a centimeter?

- F 42.0 centimeters
- G 42.1 centimeters
- H 42.2 centimeters
- J 42.3 centimeters

15 This figure is shaded to represent the number 1.

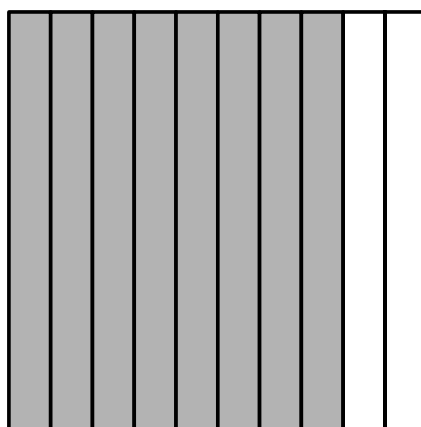


Which of the following numbers is represented by the shaded part of the figure below?

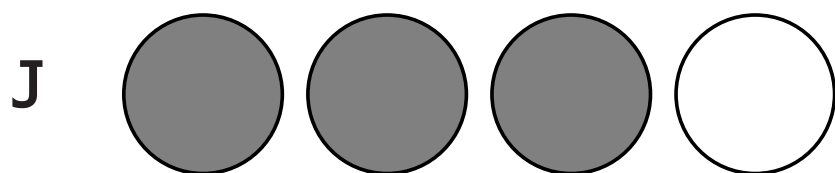
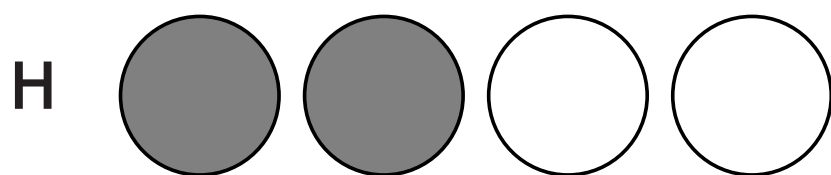
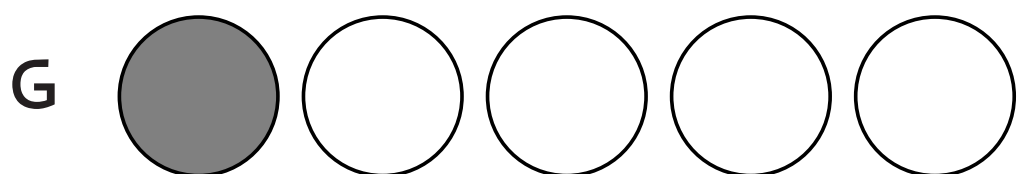
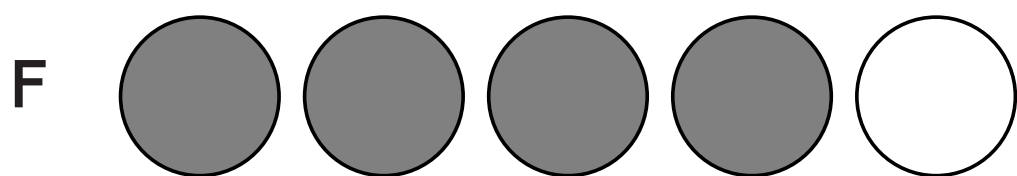


- A 63
- B 6.3
- C 0.63
- D 0.063

16 The figure below is shaded to represent a decimal.



Which of the following groups is shaded to represent a fraction with the same value as the decimal represented above?



17 Sherman read that the Sahara Desert, the largest desert in the world, covers an area of 3,541,790 square miles. What is the value of the 7 in that number?

- A 7
- B 700
- C 70,000
- D 700,000

18 Jennifer needs  $\frac{1}{2}$  cup of chocolate chips to make cookies. Which of the following amounts is equivalent to  $\frac{1}{2}$  cup?

F  $\frac{2}{3}$  cup

G  $\frac{6}{10}$  cup

H  $\frac{4}{8}$  cup

J  $\frac{2}{5}$  cup



19 Which goes in the blank to make the statement true?

$$2.301 > \underline{\hspace{2cm}}$$

- A 23.1
- B 2.3010
- C 2.310
- D 2.13

20 Which of the following shows the numbers listed from LEAST to GREATEST?

F  $0.5, \frac{3}{5}, 0.9, 1\frac{1}{3}, 1\frac{3}{4}$

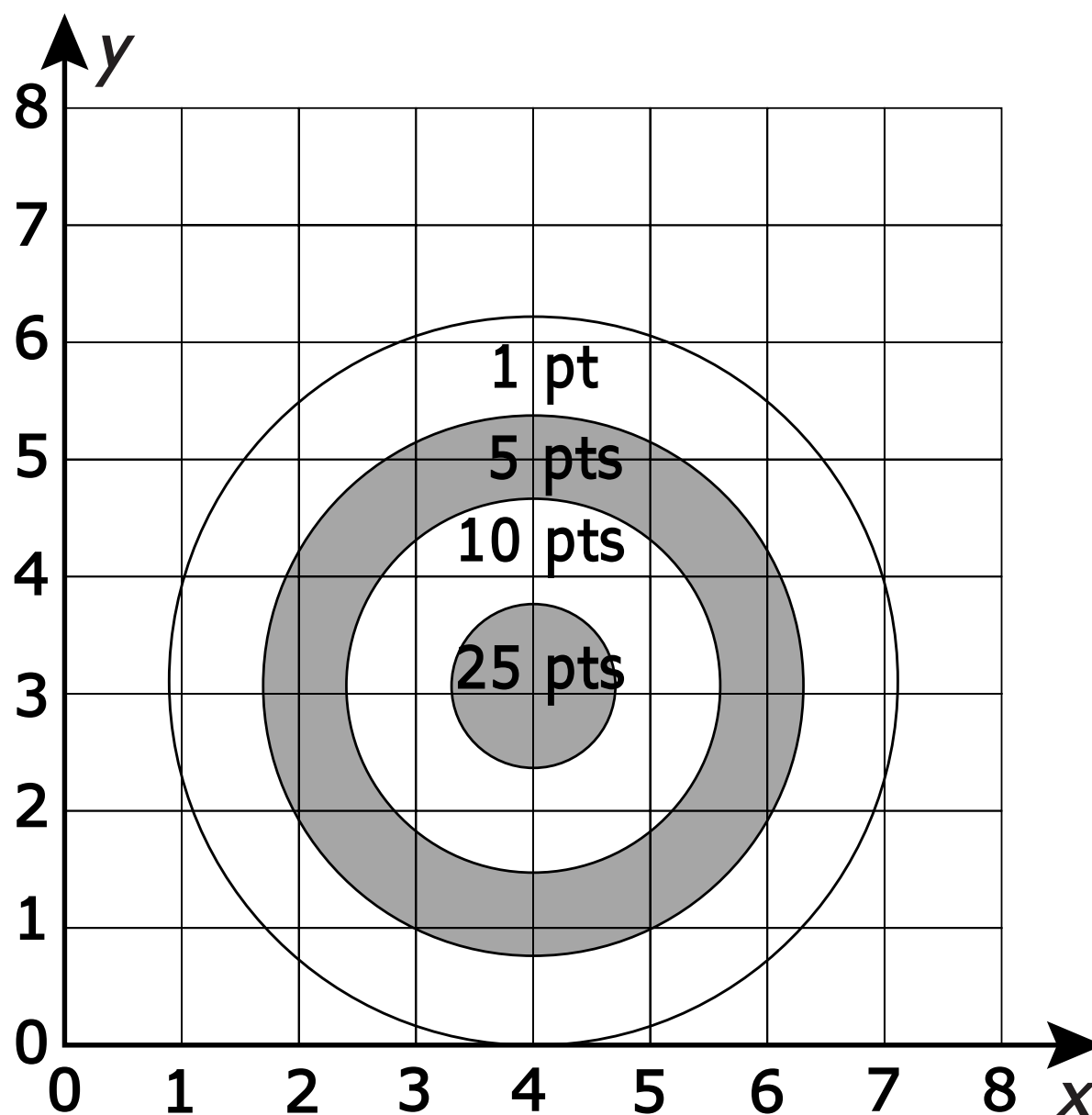
G  $1\frac{1}{3}, 1\frac{3}{4}, \frac{3}{5}, 0.5, 0.9$

H  $0.9, 1\frac{1}{3}, \frac{3}{5}, 1\frac{3}{4}, 0.5$

J  $\frac{3}{5}, 0.5, 1\frac{1}{3}, 0.9, 1\frac{3}{4}$

**Turn the page  
and  
continue working.**

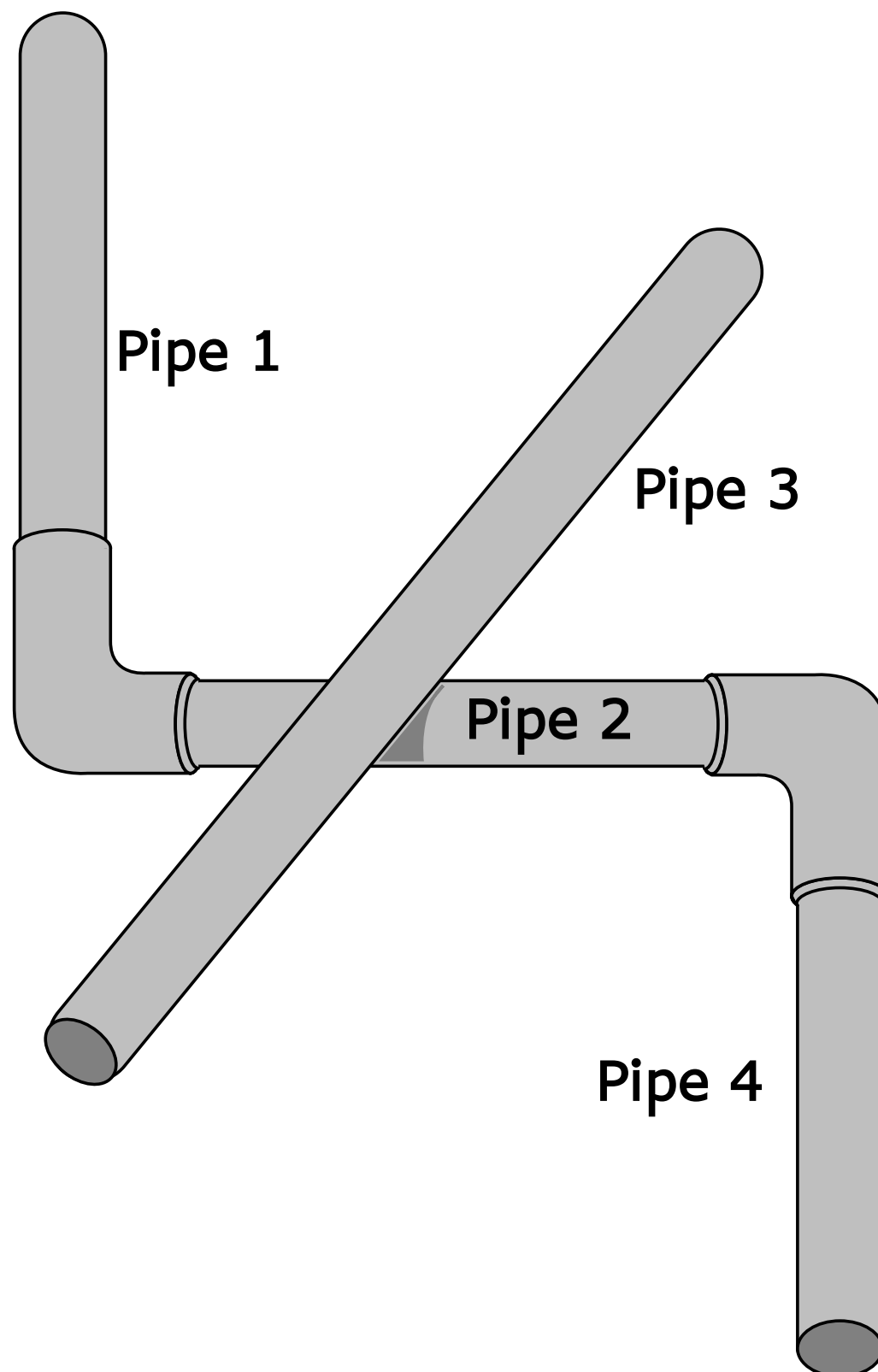
- 21 The figure below shows a coordinate grid placed over an archery target. Each ring of the target is labeled with the number of points the player will earn if an arrow lands in that ring.



Lyle's arrow landed at (3, 4). How many points should he have earned with that arrow?

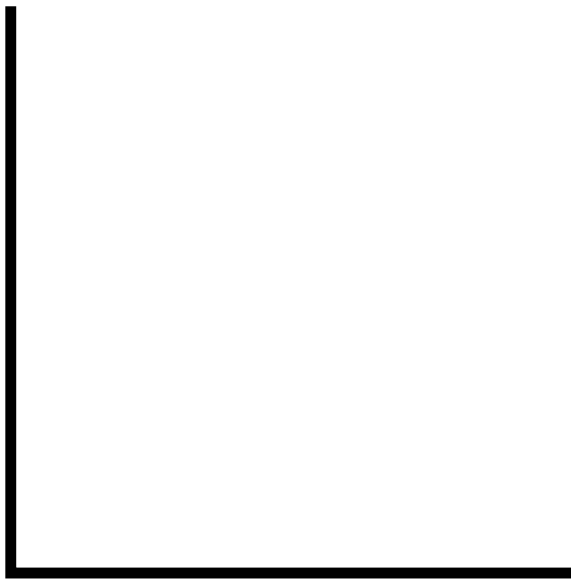
- A 1
- B 5
- C 10
- D 25

22 The diagram below shows a group of pipes in a basement. Which two pipes appear to be parallel?



- F Pipes 1 and 3
- G Pipes 2 and 3
- H Pipes 1 and 4
- J Pipes 2 and 4

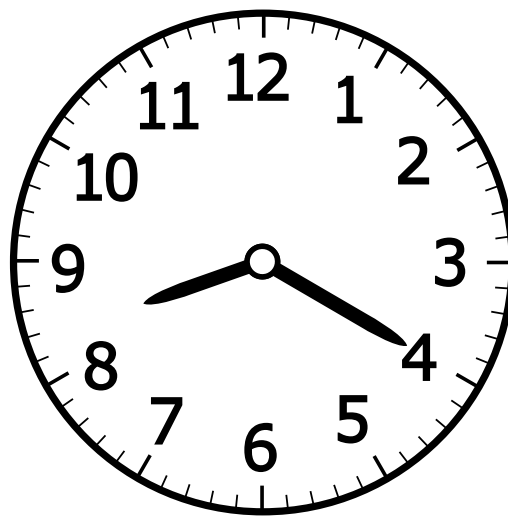
23 What type of angle is formed by the lines below?



- A Right
- B Acute
- C Obtuse
- D Straight

24 A cube can also be classified as a

- F rectangular prism
- G square-based pyramid
- H cylinder
- J rhombus



The clock shows the time Simon's mathematics class began. The class ended at 9:35. How long was the class?

- A 55 minutes
- B 1 hour, 15 minutes
- C 1 hour, 55 minutes
- D 13 hours, 15 minutes



26 Lauren used 1 quart of milk to make ice cream. Which is CLOSEST to this amount of milk?

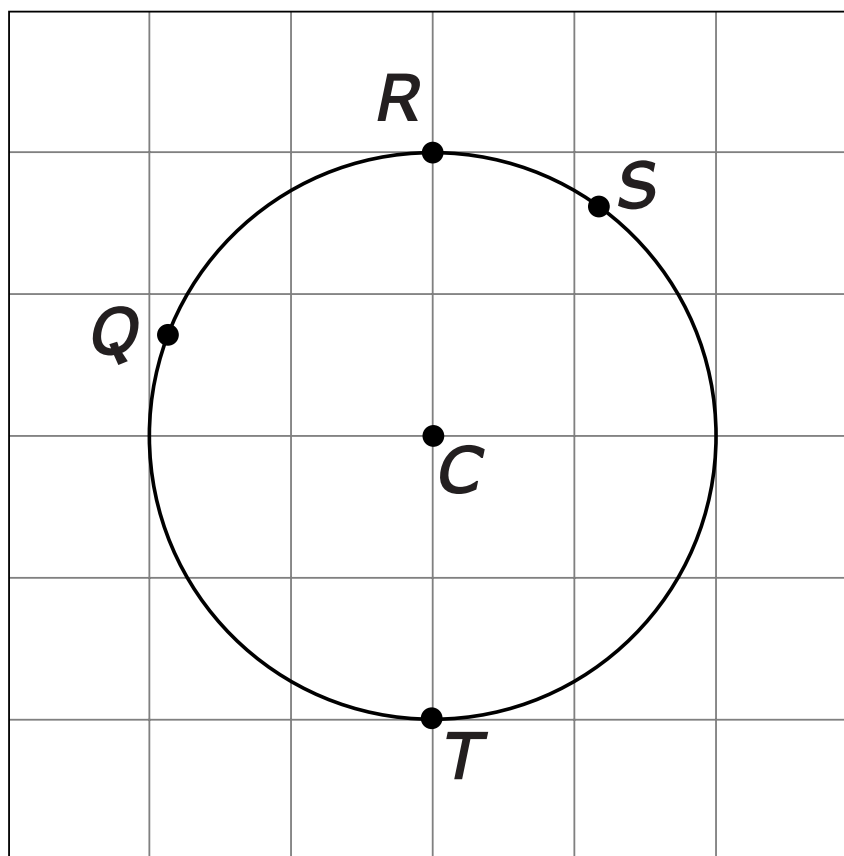
F 100 milliliters

G 100 liters

H 1 milliliter

J 1 liter

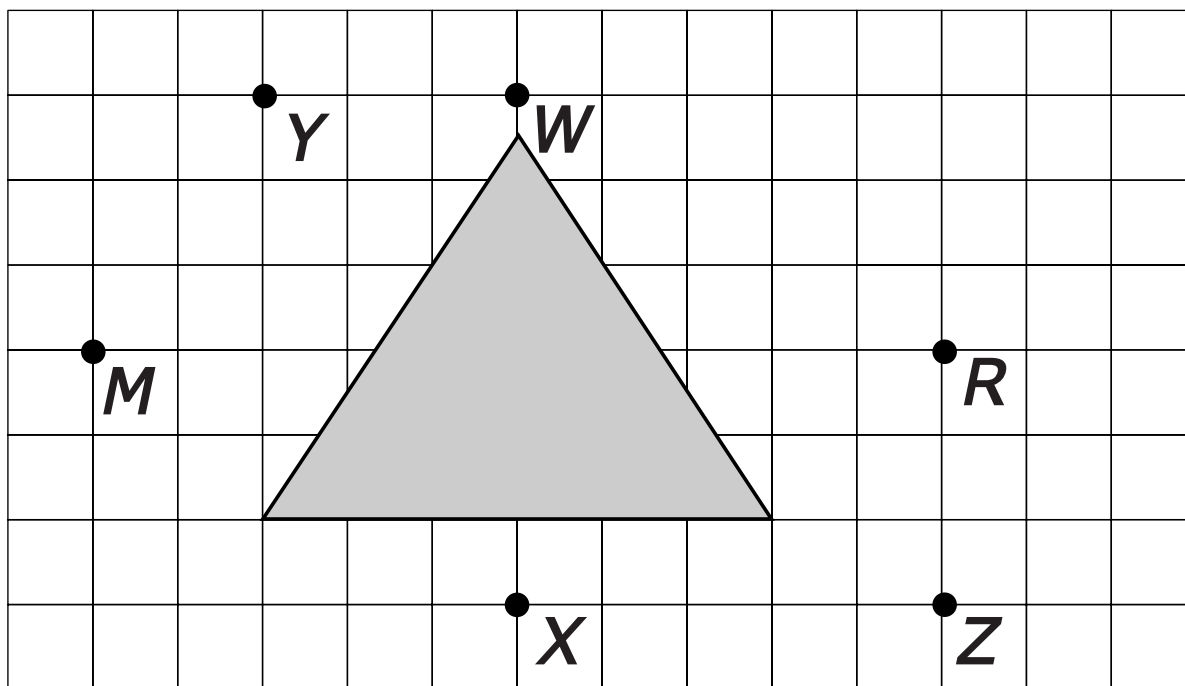
27 In the figure below, point  $C$  is the center of the circle.



Which two points can be connected to form a chord that is NOT a diameter?

- A Points  $Q$  and  $T$
- B Points  $S$  and  $C$
- C Points  $R$  and  $T$
- D Points  $T$  and  $C$

28 Which two points appear to lie on the line of symmetry for the shaded figure shown on the grid below?

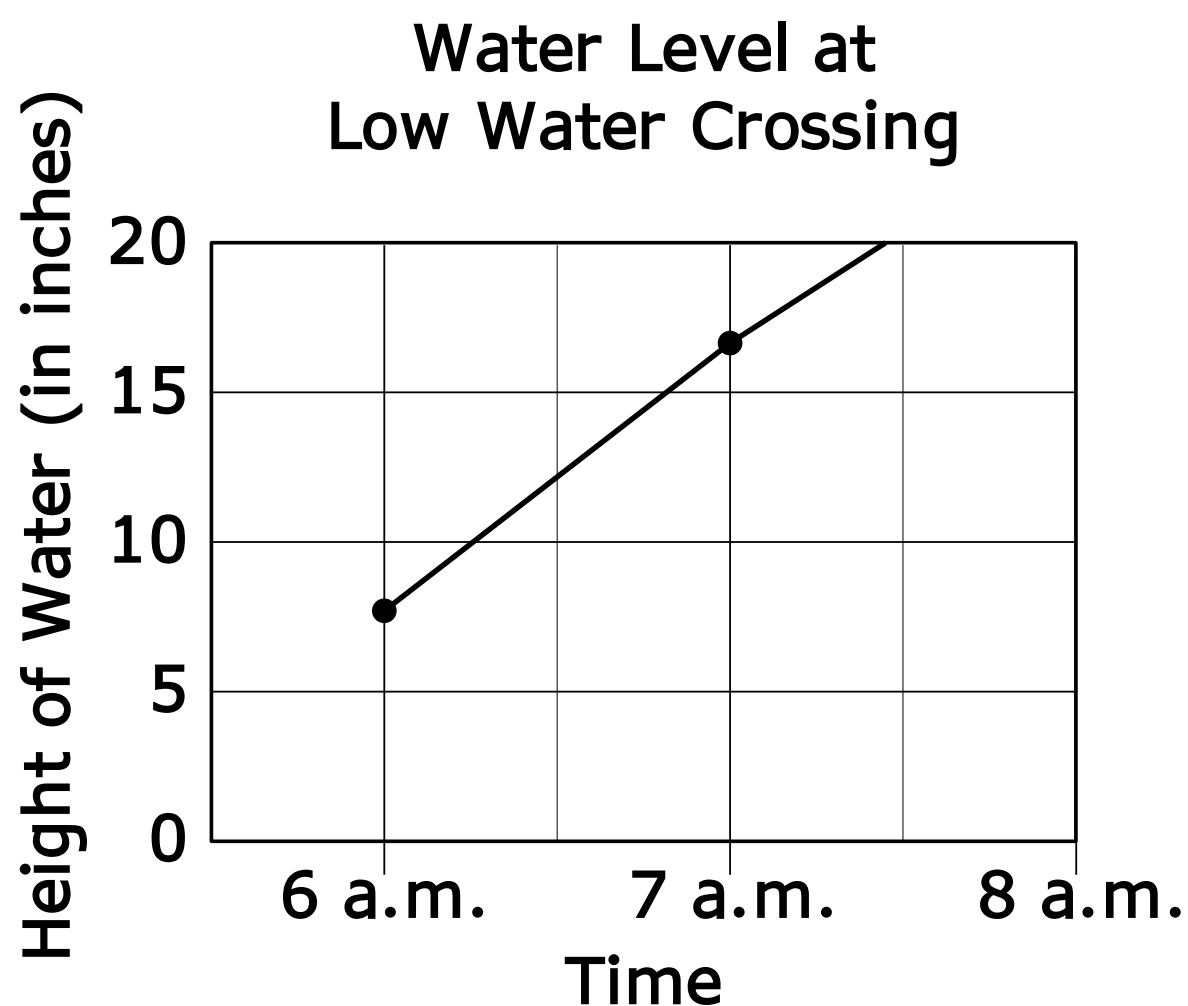


- F Points *M* and *R*
- G Points *R* and *Z*
- H Points *W* and *X*
- J Points *Y* and *Z*

29 What is the area of a rectangle that measures 9 centimeters long and 6 centimeters wide?

- A  $15 \text{ cm}^2$
- B  $27 \text{ cm}^2$
- C  $30 \text{ cm}^2$
- D  $54 \text{ cm}^2$

- 30 After a heavy rain storm, Mrs. Mendez recorded the height of the water at a low water crossing. She used her data to make the graph below.



Which is closest to the height of the water recorded at 6:30 a.m.?

- F 8 in.
- G 10 in.
- H 13 in.
- J 15 in.

- 31 Nancy has 2 quarters, 5 dimes, 1 nickel and 6 pennies in her pocket. Which of the following questions about the coins could you use probability to solve?
- A What is the total value of these coins?
  - B How many more pennies than nickels does Nancy have?
  - C If Nancy takes 1 coin from her pocket without looking, what kind of coin is it most likely to be?
  - D If Nancy finds 1 more dime, how many coins will she have then?

32 Mrs. Hunter has a box with 5 unsharpened pencils and 30 sharpened pencils. If she takes out 1 pencil without looking, what are the chances that the pencil she gets will be sharpened?

F Certain

G Likely but not certain

H Unlikely but not impossible

J Impossible

33 Maxine runs a bakery. This lists the number of special requests she received each day in a two-week period.

16	29	28	15	22	25
34	48	17	40	48	27

Which of the following stem-and-leaf plots shows this same information?



**A**

Stem	Leaf
1	3
2	5
3	1
4	3

**B**

Stem	Leaf
1	5, 6, 7
2	2, 5, 7, 8, 9
3	4
4	0, 8, 8

**C**

Stem	Leaf
1	5, 6, 7
2	2, 5, 7, 8, 8, 9
3	4
4	0, 8

**D**

Stem	Leaf
1	5, 6, 7
2	2, 5, 7, 8, 9
3	4
4	8, 8

34 Mr. Rampell gave 9 students a makeup exam. The scores were 79, 68, 100, 79, 84, 92, 68, 100, and 68. What was the mode of these scores?

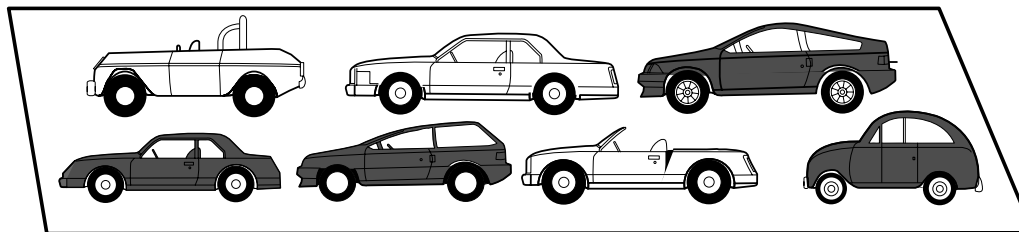
F 84

G 82

H 79

J 68

35 Gil has these model cars on a shelf.



If he takes 1 car off the shelf without looking, what is the probability that it will be white?

A  $\frac{1}{3}$

B  $\frac{3}{4}$

C  $\frac{1}{7}$

D  $\frac{3}{7}$

Shirt	Shorts	Shoes
White	Red	Sneakers
	Blue	Sandals

Which diagram shows all the possible combinations of 1 shirt, 1 pair of shorts, and 1 kind of shoes?

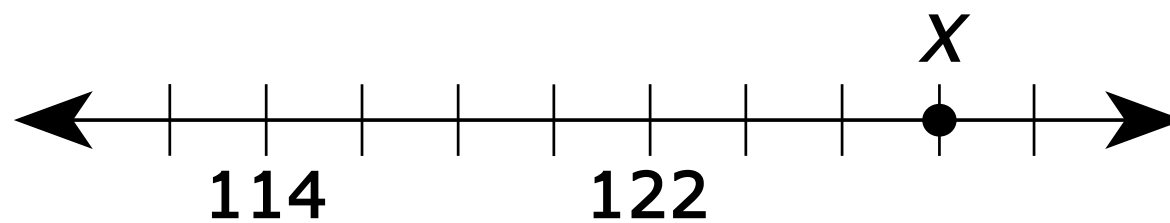
F    White ————— Red ————— Blue

G    White   
          Red ————— Sneakers  
          Blue ————— Sandals

H    White   
          Red   
          Blue

J    White   
          Red ————— Sneakers  
          Red ————— Sandals

37 Which BEST DESCRIBES the location of point  $X$  on the number line shown below?



- A 134
- B 131
- C 128
- D 125

- 38 The table shows the cost of parking in a downtown parking lot. The cost per hour for parking does not change.

Parking Costs

Number of Hours	Total Cost
1	\$2.25
2	\$4.50
3	?
4	\$9.00
5	\$11.25

Based on the pattern in the table, what will be the total cost for parking 3 hours?

- F \$8.75
- G \$6.75
- H \$6.50
- J \$5.25

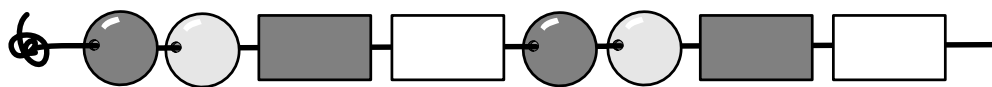
- 39 A number machine uses a rule to change numbers into different numbers. The table below shows what happened when different numbers went into the same number machine.

Input ( $x$ )	Output ( $y$ )
15	6
11	2
18	9
23	14

Which of the following could be the rule used by this number machine?


- A Divide by 2
- B Subtract 9
- C Multiply by 2
- D Add 9


40 Elsa is using a pattern to string the beads shown below.



If the pattern continues, what will the 11th bead look like?

F 

G 

H 

J 



- 41 Hiram read about a “Buy 2, Get 1 Free” sale on socks. If he buys 2 pairs of socks, he will get the 3rd pair free. He started the list below to find out how many free pairs of socks he would get.

Buy	Free Pairs
2	1
3	1
4	2
5	2

What is the LEAST number of pairs of socks Hiram would have to buy in order to get 4 free pairs?

- A 7
- B 8
- C 9
- D 12

- 42 A function machine uses a rule to change numbers into other numbers. The picture below shows what happened when the numbers 4, 12, and 7 went into the machine.

In	Out
4	32
12	96
7	56
9	—

What number will come out of the machine if the number 9 goes into it?

- F 63
- G 72
- H 81
- J 90

43 If  $C$  represents a number, which of the following means “5 less than a number”?

A  $C - 5$

B  $C \times 5$

C  $C \div 5$

D  $C + 5$

44 Which of the following will be a true statement if an equal sign ( $=$ ) is placed in the box?

F  $5 + 2 \square 5 + 5$

G  $5 + 10 \square 10 - 5$

H  $5 + 5 \square 10 \times 2$

J  $5 + 5 \square 2 \times 5$

45 Which number sentence is true for all pairs of values shown in the table below?

Input	Output
$A$	$B$
15	3
25	5
10	2
30	6

A  $A + B = 12$

B  $A - B = 20$

C  $A \div 5 = B$

D  $A = B \times 3$

46 Which can be solved using the open sentence  $F + 2 = ?$

- F There are 2 more drummers in the band than flute players. If  $F$  is the number of flute players in the band, how many drummers are there?
- G There are 2 fewer trumpet players in the band than flute players. If  $F$  is the number of flute players in the band, how many trumpet players are there?
- H There are 2 times as many flute players in the band as trombone players. If  $F$  is the number of trombone players in the band, how many flute players are there?
- J The flute players in the band sit in the first 2 rows. The same number of flute players sit in each row. If  $F$  is the total number of flute players in the band, how many sit in each row?

# Answer Key

Test Sequence	Correct Answer	Reporting Category	Reporting Category Description
1	B	007	Computation and Estimation
2	F	007	Computation and Estimation
3	C	007	Computation and Estimation
4	H	007	Computation and Estimation
5	C	007	Computation and Estimation
6	J	007	Computation and Estimation
7	D	007	Computation and Estimation
8	G	007	Computation and Estimation
9	B	007	Computation and Estimation
10	F	007	Computation and Estimation
11	A	007	Computation and Estimation
12	J	007	Computation and Estimation
13	C	006	Number and Number Sense
14	J	006	Number and Number Sense
15	C	006	Number and Number Sense
16	F	006	Number and Number Sense
17	B	006	Number and Number Sense
18	H	006	Number and Number Sense
19	D	006	Number and Number Sense
20	F	006	Number and Number Sense
21	C	008	Measurement and Geometry
22	H	008	Measurement and Geometry
23	A	008	Measurement and Geometry
24	F	008	Measurement and Geometry
25	B	008	Measurement and Geometry
26	J	008	Measurement and Geometry
27	A	008	Measurement and Geometry
28	H	008	Measurement and Geometry
29	D	008	Measurement and Geometry
30	H	009	Probability and Statistics
31	C	009	Probability and Statistics
32	G	009	Probability and Statistics
33	B	009	Probability and Statistics
34	J	009	Probability and Statistics
35	D	009	Probability and Statistics
36	H	009	Probability and Statistics
37	C	010	Patterns, Functions, and Algebra
38	G	010	Patterns, Functions, and Algebra
39	B	010	Patterns, Functions, and Algebra
40	F	010	Patterns, Functions, and Algebra
41	B	010	Patterns, Functions, and Algebra
42	G	010	Patterns, Functions, and Algebra
43	A	010	Patterns, Functions, and Algebra
44	J	010	Patterns, Functions, and Algebra
45	C	010	Patterns, Functions, and Algebra
46	F	010	Patterns, Functions, and Algebra





1 2 3 4 5 6 7 8 9 10 11 12 A B C D E